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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/118,572	07/17/1998	KARL J. WOOD	PHB34169US	9151

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EXAMINER	
YANG, RYAN R	
ART UNIT	**PAPER NUMBER**
2672	

DATE MAILED: 02/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/118,572	Applicant(s) WOOD ET AL.	
	Examiner Ryan R Yang	Art Unit 2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 January 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. This action is responsive to communications filed on 1/28/02.

This action is final.

2. Claims 1-11 are pending in this application. Claim 1 is independent claim.

This application claims foreign priority dated 7/17/97.

3. The present title of the invention is "Graphic Image Texture Generation" as filed originally.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1-4, 7, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamen et al. (5,812,141) in view of Jenkins (6,111,582).

As per claim 1, Kamen et al., hereinafter Kamen, disclose an apparatus for texture mapping in a computer graphics system (as illustrated in Figure 4), using a predetermined set of standardized textures (Figure 4; 30), the apparatus having an input (Figure 4; 92) to receive via a network identifying data identifying one of the set of standardized textures (the control signal 92, column 6, line 24), and means for processing the data to generate output texels of the identified textures (Figure 4; 4), wherein each texture of the standardized set is a procedural texture, the identifying data

comprises one or a sequence of program commands, the execution of which will result in the generation of a respective procedural texture, with the means for processing data comprising a processor operable to implement all such input program commands or sequences of input program commands as required to generate the procedural texture of the standardized set (column 6, line 26 – 36).

It is recognized that, in Figure 4, Kamen uses texture lookup table for texture determination, however, he also discloses in column 2, line 31 – 39 that the texture can also be derived by the means of procedural texturing.

Although Kamen disclose the input (92) is connected to a bus (42) , it is noted that Kamen does not explicitly disclose the identifying data is received via a network, however, this is known in the art as taught by Jenkins. Jenkins discloses an image generation method in which "Texture information can be pre-transmitted from the server to the client or transmitted at other scheduled times. Transmitted texture information includes conventional maps as well as **parameters for procedural methods of texture synthesis which are then generated by the client**. Alternatively, transmitted primitives can refer to materials and textures from prestored libraries of textures maintained by the client. The use of procedural textures and prestored texture libraries reduces the required client-server connection bandwidth. The use of prestored texture libraries allows the user to modify the appearance of the model by selecting texture preferences.", column 85, line 47-58.

Thus, it would have be obvious to one of ordinary skill in the art to incorporate the teaching of Jenkins into Kamen in order to reduces the required client-server connection bandwidth.

6. As per claim 2, the input control signals are plural (column 10, line 14 – 18).

7. As per claim 3, Kamen discloses his control signals include quality of texture (column 11, line 47 – 54).

8. As per claim 4, Kamen discloses, in his texture mapping controller, a computation method selection device (column 10, line 31 – 49) to generate pixel value. It is obvious that his method can also be used to generating procedural textures of the standardized set.

9. As per claim 7, it is notoriously known in the art (Officially noted) that a processor of many elements can be fabricated onto a single substrate for the purposes of increased processing speed and reducing power and cost.

10. As per claim 9, the input to Kamen's apparatus (Figure 4; 42) are lines and polygons (column 6, line 25 – 26). Since Kamen talks about texture in terms of "viewpoint", "perspectives" and "coordinate space" (column 1, lines 45 and 60), it is obvious that Kamen is talking about 3-dimensional polygons. Kamen also discloses means to convert 3-D data into 2-D (Figure 4; 2, 3), program command (Figure 4; select signal), and rendering means (Figure 4; 34, 28 and 6) to generate an output image with texture applied.

11. As per claim 10, it is well known in the art (Officially noted) that the polygon data and program commands can be stored in remote location and its location stored in a local memory to be retrieved at a later time.

12. Claims 5-6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamen et al. and Jenkins as applied to claims 1 above, and further in view of Griffin et al. (5,880,737).

As per claim 5, Kamen and Jenkins disclose a texture mapping apparatus with procedural texture and control signals. It is noted that Kamen and Jenkins do not disclose using a cache to store texture maps, however, this is known in the art as taught by Griffin et al., hereinafter Griffin. Griffin discloses that in order to reduce latency in memory accessing, textual samples can be stored in the texture cache (column 18, line 35 – 39).

It would have been obvious to one of ordinary skill in the art at the time of invention to include a texture cache as in Griffin into the invention of Kamen and Jenkins to reduce memory access latency.

13. As per claim 6, Kamen discloses his texture mapping apparatus has control for texture quality (column 11, line 47 – 54). It is notoriously known in the art (Officially noted) to place an interpolator after the texture map for refining the texture quality.

14. As per claim 8, it is notoriously known in the art (Officially noted) that a processor of many elements can be fabricated onto a single substrate for the purposes of increased processing speed and reducing power and cost.

15. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kamen et al. and Jenkins as applied to claim 1 above, and further in view of Tremblay et al. (5,925,123).

As per claim 11, Kamen and Jenkins disclos an apparatus with texture rendering means and control signals. It is noted that Kamen and Jenkins do not explicitly teaches the program commands are transmitted over the network in virtual machine code and a processor to convert the program commands to local machine codes, however, this is known in the art as taught by Tremblay et al., hereinafter Tremblay. Tremblay discloses a processor (Figure 6B; 635) to decode instruction transmitted over the network and convert it to local machine code.

It would have been obvious to one of ordinary skill in the art at the time of invention to include a processor locally as taught in Tremblay into the invention of Kamen and Jenkins in order to translate the instructions into local machine code in a network environment.

Response to Arguments

16. Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

The applicant also argues that the Kamen teaching do not disclose the use of standard texture. The standard texture is defined in the invention as "a local library of

the standard texture in the form of a collection of texture maps", page 2, line 22-23, which the texture lookup (Figure 4 30) of Kamen teaching certainly qualify as such.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Inquiries

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Ryan Yang** whose telephone number is **(703) 308-6133**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Michael Razavi**, can be reached at **(703) 305-4713**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

JEFFERY BRIER
PRIMARY EXAMINER

Ryan Yang
February 7, 2002